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NEW ISSUE

**AVERAGE WEEKLY EARNINGS  
AUSTRALIA  
1941 - 1990**



**IAN CASTLES**  
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### INQUIRIES

- *for further information about statistics in this publication and the availability of related unpublished statistics, contact Mr Mick Atkinson on Canberra (06) 252 5946 or any ABS State office.*
  - *for information about other ABS statistics and services please refer to the back page of this publication.*
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## SUMMARY OF FINDINGS

### Introduction

This publication provides an historical series of Average Weekly Earnings (AWE) for Australia.

The series presented here have been produced by linking together a number of past AWE series. Information on these series and the linking process can be found in the Explanatory Notes and the Technical Note at Appendix A.

### Comparison between AWE and the CPI

Diagram 1 presents a comparison of annual percentage changes in average weekly total male earnings and the Consumer Price Index for the period 1942-43 to 1989-90. The movements in the two series are broadly consistent.

Paragraphs 12 to 24 in the Explanatory Notes provide information about selected national wage case decisions

DIAGRAM 1. ANNUAL PERCENTAGE CHANGE - AWE AND CPI

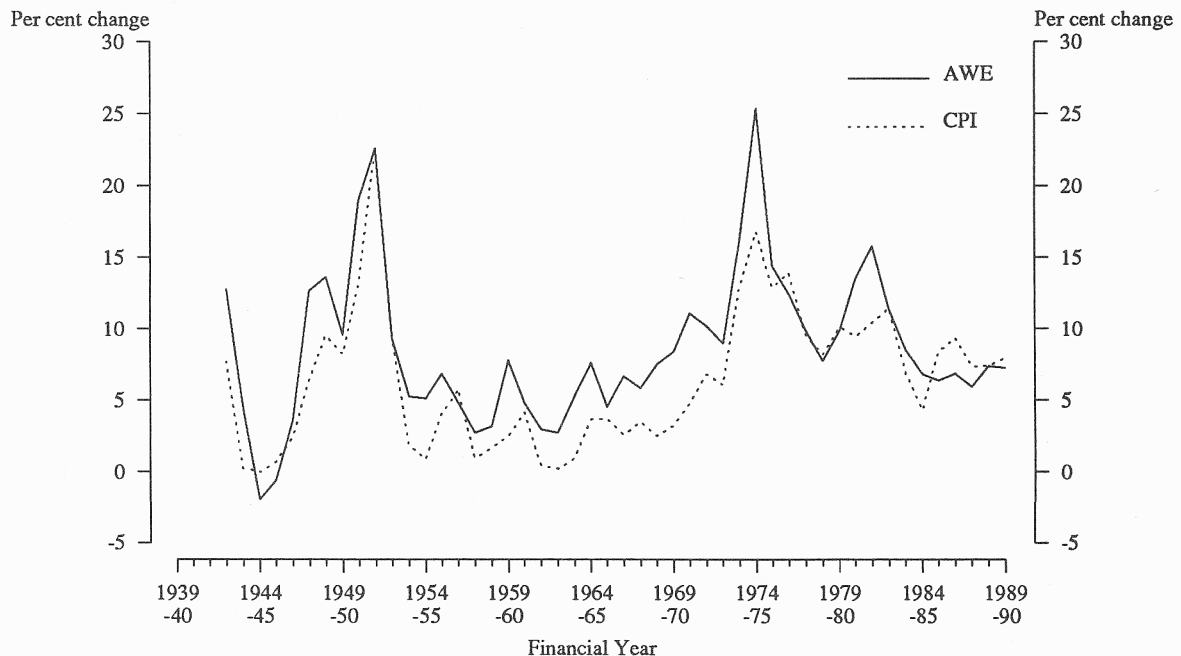
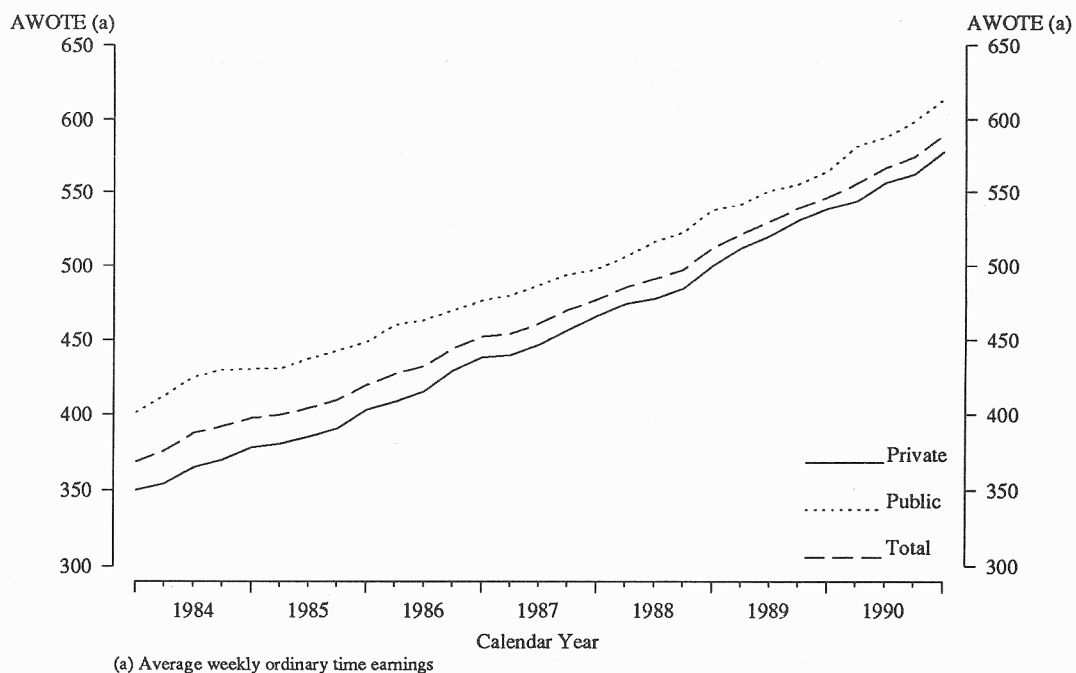


DIAGRAM 2. MALES FULL-TIME AVERAGE WEEKLY ORDINARY TIME EARNINGS



(a) Average weekly ordinary time earnings

which have had a significant impact on AWE during the life of this historical series.

#### Comparisons between the private and public sectors

Diagram 2 shows the level of average weekly ordinary time earnings for full-time males for the private and public sectors from November 1983. Diagram 3 shows a similar series for females. The series indicates that while public sector male average earnings have been consistently higher than private sector average earnings over the whole period both the absolute and percentage differences have been reducing over much of the period.

However, for full-time female average weekly ordinary time earnings, while public sector earnings are also consistently above private sector earnings over the whole period, the absolute difference in earnings between the series has remained relatively constant.

#### Comparison between female and male earnings

Diagram 4 shows full-time average weekly ordinary time earnings of adult females as a percentage of male earnings. From the diagram it can be seen that there was a marked increase in female earnings relative to male earnings from 1983.

DIAGRAM 3. FEMALES FULL-TIME AVERAGE WEEKLY ORDINARY TIME EARNINGS

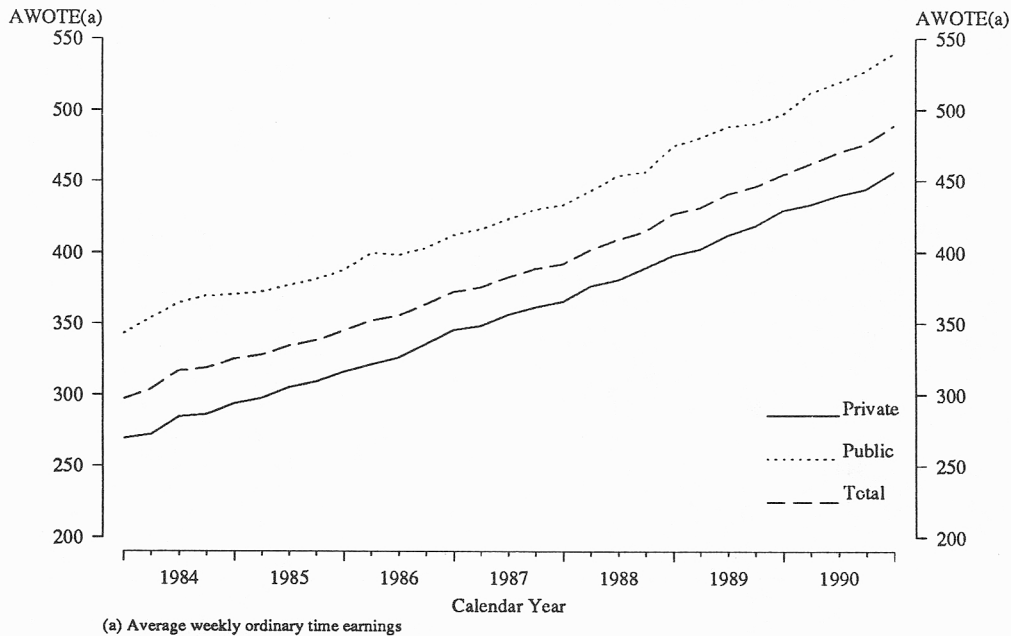


DIAGRAM 4. FEMALES FULL-TIME AVERAGE WEEKLY ORDINARY TIME EARNINGS AS A PERCENTAGE OF MALE EARNINGS



### Comparison between industries

Diagram 5 shows the comparative growth rates of average weekly ordinary time earnings of full-time adult persons for a number of selected industries.

It can be seen from the diagram that growth rates for average weekly earnings for females in most industries has exceeded that of males.

**DIAGRAM 5. FULL-TIME ADULT NON-MANAGERIAL EMPLOYEES: AVERAGE WEEKLY EARNINGS  
PERCENTAGE GROWTH, NOVEMBER 1974 TO NOVEMBER 1990**

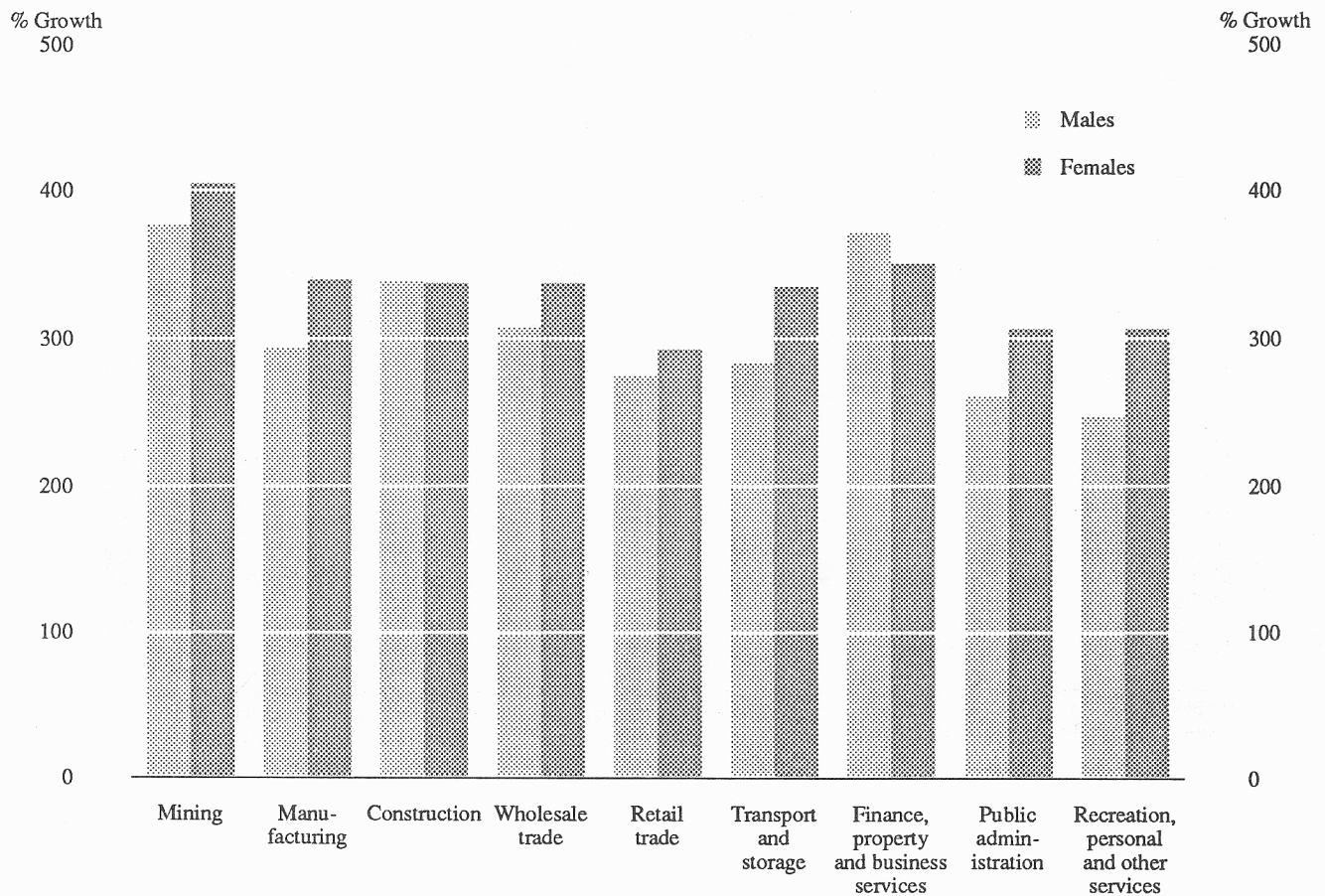


TABLE 1. COMPARISON OF MOVEMENTS IN AVERAGE WEEKLY TOTAL MALE EARNINGS AND CONSUMER PRICE INDEX: ANNUAL PERCENTAGE CHANGE - 1942-43 TO 1989-90  
(Per cent)

<i>Year (a)</i>	<i>Consumer Price Index</i>	<i>Average Weekly Earnings</i>	<i>Year (a)</i>	<i>Consumer Price Index</i>	<i>Average Weekly Earnings</i>
			1965-66	3.7	4.5
1942-43	7.7	12.8	1966-67	2.6	6.7
1943-44	0.2	4.5	1967-68	3.5	5.8
1944-45	0.0	-1.9	1968-69	2.5	7.5
			1969-70	3.2	8.4
1945-46	0.7	-0.6	1970-71	4.8	11.1
1946-47	2.4	3.6	1971-72	6.8	10.2
1947-48	6.4	12.7	1972-73	6.0	9.0
1948-49	9.6	13.6	1973-74	13.0	16.2
1949-50	8.2	9.6	1974-75	16.8	25.4
1950-51	13.1	19.0	1975-76	12.9	14.4
1951-52	22.7	22.7	1976-77	13.9	12.4
1952-53	9.4	9.3	1977-78	9.5	9.9
1953-54	1.9	5.2	1978-79	8.2	7.7
1954-55	0.9	5.1	1979-80	10.1	9.8
1955-56	4.0	6.8	1980-81	9.4	13.5
1956-57	5.7	4.8	1981-82	10.4	15.8 (b)
1957-58	1.0	2.7	1982-83	11.5	11.4
1958-59	1.7	3.2	1983-84	6.9	8.5
1959-60	2.4	7.8	1984-85	4.3	6.8
1960-61	4.1	4.8	1985-86	8.4	6.4
1961-62	0.4	3.0	1986-87	9.4	6.8
1962-63	0.2	2.7	1987-88	7.3	5.9
1963-64	1.0	5.3	1988-89	7.4	7.4
1964-65	3.6	7.6	1989-90	8.0	7.2

(a) Financial years. (b) From August 1981 the reference date for Average Weekly Earnings was changed from the end of a quarter to the mid-point of a quarter.

TABLE 2. ALL MALES: AVERAGE WEEKLY TOTAL EARNINGS (NOT SEASONALLY ADJUSTED),  
AUSTRALIA, SEPTEMBER QUARTER 1941 TO NOVEMBER 1990  
(dollars)

<i>Year</i>	<i>March Qtr</i>	<i>June Qtr</i>	<i>September Qtr</i>	<i>December Qtr</i>
1941	..	..	10.40	10.90
1942	10.70	11.80	12.00	12.60
1943	12.10	12.70	12.80	13.40
1944	12.50	12.90	12.60	13.00
1945	12.20	12.80	12.70	12.90
1946	12.00	12.70	12.60	13.30
1947	12.60	13.60	13.90	15.10
1948	14.10	15.60	16.10	17.20
1949	15.80	17.60	17.30	18.80
1950	17.70	19.30	19.70	21.50
1951	21.60	24.20	25.10	27.40
1952	26.00	28.20	28.60	30.50
1953	27.70	29.80	30.30	31.90
1954	29.30	31.20	31.70	33.20
1955	30.60	33.50	33.80	35.50
1956	33.10	35.40	35.50	37.60
1957	34.60	36.70	36.70	38.80
1958	35.20	37.60	38.00	40.20
1959	36.10	38.70	40.10	42.20
1960	39.70	42.90	42.90	45.00
1961	41.20	43.70	43.60	45.90
1962	42.70	45.70	44.70	47.20
1963	43.80	47.00	46.50	50.60
1964	45.80	49.40	50.60	53.80
1965	49.60	52.90	53.80	55.70
1966	51.90	54.90	56.90	59.00
1967	55.40	59.40	60.00	62.50
1968	58.90	62.70	63.20	67.60
1969	63.80	67.80	69.10	73.60
1970	67.70	74.00	75.40	80.40
1971	76.40	83.70	84.30	89.90
1972	83.40	90.60	90.50	97.30
1973	90.80	100.80	103.10	112.20
1974	105.60	119.90	129.00	143.90
1975	134.00	145.70	146.90	163.70
1976	154.00	167.60	172.20	182.10
1977	171.30	185.20	190.20	198.00
1978	191.10	201.60	204.00	212.70
1979	207.60	216.80	222.60	231.90
1980	229.00	240.30	252.00	270.00
1981	252.20	274.30	..	..
	<i>February</i>	<i>May</i>	<i>August</i>	<i>November</i>
1981	..	..	283.30	296.00
1982	312.40	322.30	329.90	337.60
1983	341.00	343.30	349.70	362.00
1984	370.60	383.80	386.20	389.50
1985	392.70	397.20	403.10	413.90
1986	422.70	425.50	437.20	446.30
1987	444.50	450.90	457.00	470.00
1988	474.90	481.70	486.20	505.20
1989	511.60	519.10	527.10	540.00
1990	546.30	555.80	562.70	578.20

Source: *Average Weekly Earnings, States and Australia* (6302.0).

TABLE 3. AVERAGE WEEKLY EARNINGS OF EMPLOYEES, AUSTRALIA,  
AUGUST 1981 TO NOVEMBER 1990  
(dollars)

Reference period - pay period ending on or before	Males			Females			Persons		
	Full-time adults		All males	Full-time adults		All females	Full-time adults		All employees
	Ordinary time earnings	Total earnings	Total earnings	Ordinary time earnings	Total earnings	Total earnings	Ordinary time earnings	Total earnings	Total earnings
TOTAL EMPLOYEES									
1981—									
14 August	283.20	306.80	283.30	230.60	236.70	190.30	267.00	284.80	247.20
23 October	295.90	322.80	296.00	239.10	245.90	193.00	278.50	299.00	255.60
1982—									
19 February	309.80	336.40	312.40	246.10	253.20	202.60	289.40	310.10	269.20
21 May	320.00	347.00	322.30	256.90	263.50	210.80	300.10	320.50	278.30
20 August	334.20	357.90	329.90	265.90	271.70	217.00	312.40	330.30	285.00
19 November	346.30	370.30	337.60	276.70	282.20	218.70	324.80	342.70	290.40
1983—									
18 February	350.50	370.30	341.00	280.90	286.20	225.30	328.60	343.70	295.40
20 May	353.40	375.00	343.30	281.80	288.20	226.70	330.80	347.30	297.00
19 August	357.10	379.80	349.70	283.80	289.90	228.30	333.50	350.80	300.80
18 November	368.90	394.10	362.00	297.40	303.90	237.20	346.00	365.10	311.30
1984—									
17 February	376.20	400.70	370.60	304.10	311.00	246.50	353.00	371.90	321.30
18 May	388.00	415.70	383.80	316.90	324.20	257.10	365.20	386.30	333.40
17 August	392.40	419.20	386.20	319.00	326.70	256.20	369.00	389.80	334.30
16 November	397.80	427.30	389.50	325.50	333.50	255.10	375.30	398.10	335.40
1985—									
15 February	399.60	429.00	392.70	328.40	335.90	260.10	377.50	400.10	340.10
17 May	404.50	435.50	397.20	334.40	343.10	263.40	382.80	406.90	344.10
16 August	409.80	441.60	403.10	338.70	346.80	265.00	387.90	412.50	347.80
15 November	419.60	453.60	413.90	345.30	353.70	268.40	396.90	423.10	355.60
1986—									
21 February	427.20	460.10	422.70	352.80	360.60	276.40	404.20	429.50	364.10
16 May	432.60	465.90	425.50	356.40	364.90	278.20	409.20	434.90	366.50
15 August	444.00	476.20	437.20	363.60	371.90	282.90	418.90	443.70	373.70
21 November	452.10	488.60	446.30	372.70	382.00	287.60	427.20	455.20	380.60
1987—									
20 February	454.40	487.70	444.50	375.70	384.10	291.00	429.60	455.10	381.30
15 May	461.30	497.40	450.90	383.00	393.10	298.90	436.20	464.00	387.30
21 August	470.30	504.50	457.00	388.90	398.20	302.30	444.20	470.50	392.50
20 November	477.50	516.30	470.00	392.00	401.90	306.50	450.10	479.70	401.80
1988—									
19 February	485.70	522.40	474.90	402.20	412.20	315.30	458.80	486.90	408.80
20 May	491.40	532.40	481.70	409.20	419.50	316.40	464.80	495.80	411.90
19 August	497.80	538.80	486.20	415.00	426.40	319.60	470.90	502.40	415.70
18 November	512.70	558.90	505.20	426.80	439.60	328.70	484.90	520.20	430.10
1989—									
17 February	521.90	563.70	511.60	431.30	443.30	334.80	492.30	524.30	436.30
19 May	530.40	576.60	519.10	440.80	453.80	339.00	501.10	536.50	442.20
18 August	539.30	585.00	527.10	446.00	459.30	342.10	508.40	543.40	446.80
17 November	547.00	595.90	540.00	454.50	467.60	349.30	516.60	553.80	457.20
1990—									
16 February	555.80	600.20	546.30	462.40	475.10	358.30	524.70	558.60	464.80
18 May	566.60	613.30	555.80	470.20	483.00	361.80	534.10	569.30	470.00
17 August	574.10	619.90	562.70	476.30	488.80	365.00	541.00	575.60	474.80
16 November	589.20	635.80	578.20	488.90	501.20	377.90	555.60	590.60	490.60
Standard errors (a)—									
1990—									
November									
Level	4.70	4.70	4.90	2.30	2.30	3.10	3.40	3.40	3.80
Change (quarterly)	3.50	3.50	3.40	1.80	1.90	2.30	2.10	2.10	2.30

(a) See Appendix B.

Source: *Average Weekly Earnings, States and Australia* (6302.0).



TABLE 4. AVERAGE WEEKLY EARNINGS OF EMPLOYEES, SECTOR, AUSTRALIA,  
NOVEMBER 1983 TO NOVEMBER 1990  
(dollars)

Reference period - pay period ending on or before	Males			Females			Persons		
	Full-time adults		All males	Full-time adults		All females	Full-time adults		All employees
	Ordinary time earnings	Total earnings	Total earnings	Ordinary time earnings	Total earnings	Total earnings	Ordinary time earnings	Total earnings	Total earnings
PRIVATE SECTOR EMPLOYEES									
1983—									
18 November	350.00	379.00	339.90	269.80	277.00	208.40	324.50	346.60	284.80
1984—									
17 February	354.40	382.10	345.10	272.80	280.80	215.00	328.50	349.90	291.70
18 May	365.20	396.70	357.80	285.10	293.60	224.40	340.00	364.20	303.20
17 August	370.20	400.00	360.10	286.80	295.60	223.90	344.20	367.40	304.40
16 November	378.10	411.50	365.50	294.00	303.30	223.40	352.90	379.20	307.30
1985—									
15 February	380.80	414.90	368.80	297.70	306.50	226.30	356.00	382.50	311.30
17 May	385.40	420.40	374.00	305.30	315.40	232.10	361.60	389.20	316.60
16 August	390.80	427.10	380.60	309.40	318.40	233.10	366.90	395.20	321.10
15 November	403.30	443.10	395.00	316.40	326.20	237.70	378.00	409.10	331.40
1986—									
21 February	408.40	446.50	400.70	321.30	330.30	242.70	382.80	412.30	336.80
16 May	414.90	453.10	403.90	326.30	336.00	245.80	389.30	419.30	340.30
15 August	429.10	466.60	419.60	335.60	345.40	252.10	401.60	430.80	350.50
21 November	438.20	481.80	430.60	345.70	356.80	257.40	410.60	444.50	358.50
1987—									
20 February	439.80	479.50	425.50	348.50	358.30	259.40	412.40	443.10	356.30
15 May	446.80	490.00	433.60	356.80	368.90	269.60	419.10	452.80	364.50
21 August	456.90	497.50	439.20	361.80	372.60	271.40	427.80	459.30	368.90
20 November	466.40	512.30	456.00	365.90	377.60	277.50	435.50	470.80	381.30
1988—									
19 February	474.60	518.00	458.40	376.70	388.60	284.10	444.40	478.00	386.00
20 May	477.90	525.80	464.20	380.90	392.30	283.50	447.80	484.40	387.60
19 August	484.90	533.00	469.20	389.20	402.50	287.70	455.30	492.70	392.40
18 November	500.00	554.40	488.50	398.20	413.60	296.40	468.50	510.80	406.70
1989—									
17 February	512.10	561.10	496.20	402.60	417.10	301.70	477.70	515.90	412.80
19 May	520.30	573.30	503.10	412.20	427.00	305.10	486.70	527.80	418.60
18 August	531.40	584.00	512.70	418.70	433.70	306.90	496.10	536.90	423.70
17 November	538.90	595.40	528.20	429.30	444.20	316.30	505.00	548.60	436.70
1990—									
16 February	544.00	594.60	529.10	433.20	447.70	321.50	509.20	548.40	439.20
18 May	556.40	609.80	540.70	439.80	453.50	323.40	519.40	560.20	444.90
17 August	562.20	615.30	546.40	444.10	457.70	325.70	524.60	565.20	448.60
16 November	577.50	630.30	560.40	456.20	469.50	337.30	539.60	580.00	464.10
Standard errors (a)—									
1990—									
November									
Level	7.00	7.00	7.10	3.80	3.70	4.40	5.30	5.30	5.50
Change (quarterly)	5.10	5.10	4.90	3.00	3.00	3.40	3.40	3.20	3.50

See footnotes at end of table.

TABLE 4. AVERAGE WEEKLY EARNINGS OF EMPLOYEES, SECTOR, AUSTRALIA,  
NOVEMBER 1983 TO NOVEMBER 1990—continued  
(dollars)

Reference period - pay period ending on or before	Males			Females			Persons		
	Full-time adults		All males	Full-time adults		All females	Full-time adults		All employees
	Ordinary time earnings	Total earnings	Total earnings	Ordinary time earnings	Total earnings	Total earnings	Ordinary time earnings	Total earnings	Total earnings
PUBLIC SECTOR EMPLOYEES									
1983—									
18 November	401.60	420.50	405.00	343.30	348.60	303.20	382.60	397.00	366.40
1984—									
17 February	412.60	431.90	419.10	354.20	359.10	316.70	393.50	408.10	381.00
18 May	424.80	446.30	430.80	364.90	370.40	325.10	405.00	421.30	391.10
17 August	430.10	451.60	435.90	369.70	375.80	326.30	410.30	426.80	394.40
16 November	430.80	453.50	435.30	370.90	376.90	321.20	411.00	428.20	391.10
1985—									
15 February	430.80	452.60	438.10	372.40	378.10	330.30	411.50	427.90	396.80
17 May	437.30	461.40	442.40	377.40	384.30	329.90	417.60	436.00	399.40
16 August	442.60	466.70	446.50	381.60	388.30	329.60	422.50	440.80	400.60
15 November	448.50	472.10	451.40	387.90	394.40	331.60	428.50	446.60	404.00
1986—									
21 February	460.60	484.40	466.60	399.90	406.00	347.30	440.50	458.40	419.80
16 May	463.50	488.20	468.10	398.60	405.40	343.20	441.70	460.40	418.50
15 August	470.20	493.10	470.90	403.20	409.60	342.90	447.40	464.70	418.50
21 November	476.80	500.60	477.20	412.30	418.80	348.50	454.90	472.90	424.40
1987—									
20 February	480.50	502.50	483.30	416.40	422.80	359.50	458.80	475.40	433.50
15 May	487.60	510.90	486.20	423.20	430.20	360.60	465.40	483.10	434.30
21 August	494.60	517.30	493.50	430.20	437.00	367.20	472.40	489.60	441.30
20 November	498.20	523.80	498.90	433.50	440.70	367.30	476.00	495.30	444.30
1988—									
19 February	506.40	530.70	510.50	443.00	450.00	383.10	484.50	502.80	458.10
20 May	516.80	544.60	518.80	454.00	462.60	387.30	494.90	516.10	463.70
19 August	522.90	550.10	523.90	456.70	465.00	390.30	499.60	520.20	467.40
18 November	538.30	568.00	543.10	474.60	483.10	402.90	515.90	538.10	483.60
1989—									
17 February	542.10	569.00	547.50	480.70	488.60	415.10	520.40	540.60	492.10
19 May	551.30	583.60	556.60	488.70	498.70	417.70	528.90	553.20	497.10
18 August	555.50	587.30	560.50	490.60	501.10	422.80	531.80	555.80	500.30
17 November	564.70	597.20	568.70	496.90	507.00	426.60	539.80	564.00	506.20
1990—									
16 February	581.50	612.30	588.10	512.00	521.60	447.50	555.80	578.70	527.10
18 May	588.20	620.60	591.30	519.60	530.80	450.50	562.40	586.80	528.60
17 August	598.90	629.40	600.40	527.80	538.50	453.70	572.10	595.20	534.70
16 November	613.60	647.00	619.20	539.90	550.70	465.10	585.80	610.70	549.90
Standard errors (a)—									
1990—									
November									
Level	2.10	1.90	2.00	1.10	1.10	2.30	1.40	1.30	1.80
Change (quarterly)	2.00	1.80	1.80	0.80	0.70	1.00	1.10	1.10	1.10

(a) See Appendix B.

Source: *Average Weekly Earnings, States and Australia* (6302.0).

TABLE 5. FULL-TIME ADULT NON-MANAGERIAL EMPLOYEES: AVERAGE WEEKLY EARNINGS,  
INDUSTRY, AUSTRALIA, AT NOVEMBER, 1974 TO 1990  
(dollars)

Industry	MALES								
	1974	1975	1976	1977	1978	1979	1980	1981	1982
Mining	186.30	219.00	253.70	281.90	298.50	342.50	396.40	467.90	565.60
Manufacturing	145.00	157.50	178.80	198.10	213.10	238.50	264.80	304.70	335.80
Food, beverages and tobacco	142.00	157.60	177.30	198.60	212.50	235.10	255.80	312.80	354.60
Textiles; Clothing and footwear	124.40	145.90	163.20	187.50	195.60	220.10	236.80	250.40	301.20
Paper, paper products, printing and publishing	153.80	171.10	191.50	215.10	234.80	255.60	308.50	331.00	367.20
Chemical, petroleum, and coal products	157.30	174.80	196.10	215.50	237.20	268.80	302.30	313.70	363.60
Metal products, machinery and equipment	147.60	155.90	179.70	197.30	211.30	235.40	261.70	309.80	330.70
Basic metal products	164.10	170.60	196.60	221.60	235.10	264.00	302.30	348.60	364.50
Fabricated metal products; other machinery and equipment	145.00	151.60	174.60	189.10	202.60	228.30	247.90	308.00	326.60
Transport equipment	140.30	152.30	175.90	192.40	206.60	225.60	250.80	280.60	312.90
Other manufacturing	137.80	153.00	170.50	188.50	204.40	237.70	254.30	272.30	312.50
Electricity, gas and water	151.70	176.50	200.70	216.90	237.10	259.20	296.50	332.50	387.90
Construction	148.50	162.10	184.50	207.90	218.90	236.80	268.70	316.30	362.50
Wholesale trade	132.90	151.50	171.40	190.50	211.70	222.20	246.40	285.50	315.80
Retail trade	126.00	142.10	159.70	173.40	187.60	198.80	223.30	249.20	277.20
Transport and storage	162.50	174.30	198.30	221.50	232.70	249.40	282.50	333.30	374.30
Communication	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Finance, property and business services	138.50	162.70	186.20	205.80	217.30	237.30	267.40	291.50	365.30
Public administration and defence	155.60	176.80	205.70	224.70	236.70	255.30	291.20	312.30	369.40
Community services	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Recreation, personal and other services	133.60	156.20	174.20	193.70	207.00	214.40	260.80	277.10	305.10
<b>Total all industries</b>	<b>147.80</b>	<b>164.40</b>	<b>187.60</b>	<b>207.70</b>	<b>222.10</b>	<b>242.60</b>	<b>274.10</b>	<b>311.00</b>	<b>356.60</b>
									<i>Standard errors level(a)</i>
	1983	1984	1985	1986	1987	1988	1989	1990	Nov 1990
Mining	535.30	607.40	629.40	675.40	720.80	749.60	826.00	886.60	1.80
Manufacturing	362.10	386.30	415.10	437.40	467.10	512.60	556.40	571.30	0.80
Food, beverages and tobacco	366.20	381.40	397.60	429.40	450.30	496.90	537.10	557.30	1.30
Textiles; Clothing and footwear	331.30	334.60	366.10	400.70	435.90	477.10	518.80	522.00	5.10
Paper, paper products, printing and publishing	378.00	430.20	451.80	482.50	532.00	558.00	603.90	591.40	1.40
Chemical, petroleum, and coal products	392.80	429.50	453.00	504.90	511.70	601.40	608.90	641.10	2.70
Metal products, machinery and equipment	367.30	390.40	422.50	443.40	471.10	520.70	570.60	585.80	1.10
Basic metal products	399.10	427.40	464.80	499.00	531.10	578.70	641.90	669.40	0.40
Fabricated metal products; other machinery and equipment	357.10	375.10	406.90	427.30	445.40	502.40	544.50	560.90	2.10
Transport equipment	360.30	391.10	419.40	431.30	470.10	506.00	555.30	562.70	2.20
Other manufacturing	333.30	356.70	392.60	398.80	436.70	473.70	541.70	558.90	1.10
Electricity, gas and water	412.80	447.00	456.10	493.90	510.30	546.90	587.50	628.40	0.10
Construction	373.50	425.10	443.60	482.90	499.30	567.40	613.30	651.70	3.20
Wholesale trade	338.30	358.90	399.40	419.10	440.10	461.00	482.10	541.90	2.90
Retail trade	280.70	315.90	336.30	358.80	376.90	422.80	438.80	472.40	2.90
Transport and storage	394.10	423.30	443.70	482.00	518.40	546.50	562.80	622.40	1.20
Communication	n.a.	n.a.	n.a.	445.00	464.50	508.70	534.30	578.50	1.10
Finance, property and business services	367.90	386.20	415.10	448.70	501.00	536.50	574.80	651.90	3.30
Public administration and defence	400.00	424.70	444.20	429.00	450.70	492.30	540.90	561.50	1.00
Community services	n.a.	n.a.	n.a.	491.00	509.00	546.90	575.40	610.00	0.80
Recreation, personal and other services	308.90	345.20	368.50	400.20	420.50	443.70	451.60	464.20	3.10
<b>Total all industries</b>	<b>374.00</b>	<b>405.50</b>	<b>428.70</b>	<b>456.00</b>	<b>481.90</b>	<b>522.30</b>	<b>554.20</b>	<b>590.50</b>	<b>0.60</b>

See footnotes at end of table.

TABLE 5. FULL-TIME ADULT NON-MANAGERIAL EMPLOYEES: AVERAGE WEEKLY EARNINGS,  
INDUSTRY, AUSTRALIA, AT NOVEMBER, 1974 TO 1990—*continued*  
(dollars)

Industry	FEMALES								
	1974	1975	1976	1977	1978	1979	1980	1981	1982
Mining	116.20	142.20	163.50	187.10	206.60	225.70	250.90	296.40	335.20
Manufacturing	99.40	116.00	132.60	149.30	159.70	173.00	179.00	222.60	252.20
Food, beverages and tobacco	100.50	118.70	135.90	153.30	162.70	184.90	203.20	239.40	271.80
Textiles; Clothing and footwear	88.40	109.10	124.40	142.30	152.40	162.60	181.20	205.10	238.30
Paper, paper products, printing and publishing	102.90	121.40	136.10	154.20	162.90	180.60	209.20	229.90	272.40
Chemical, petroleum, and coal products	108.20	126.50	142.80	161.30	170.50	182.40	217.30	241.60	261.20
Metal products, machinery and equipment	106.60	119.00	135.60	149.10	162.20	176.70	197.60	221.20	247.70
Basic metal products	111.90	130.70	152.00	169.00	183.20	197.30	231.00	242.00	289.40
Fabricated metal products; other machinery and equipment	106.00	117.10	132.60	144.80	157.00	173.60	191.70	215.20	240.30
Transport equipment	106.40	120.50	140.10	156.20	171.00	178.20	207.80	232.40	254.80
Other manufacturing	96.00	113.40	130.50	150.20	155.90	165.80	205.50	216.10	244.80
Electricity, gas and water	117.60	134.60	158.10	177.60	188.70	204.20	235.60	256.50	299.00
Construction	101.10	123.20	141.10	158.30	172.90	177.40	208.40	221.20	252.50
Wholesale trade	101.70	121.70	137.70	156.60	176.80	182.90	202.90	232.80	266.10
Retail trade	99.90	119.30	136.00	151.30	158.70	169.60	194.30	211.30	234.40
Transport and storage	126.60	134.10	158.00	175.20	187.60	219.30	237.60	277.60	321.50
Communication	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Finance, property and business services	106.20	128.60	150.20	165.90	172.00	189.60	214.00	245.30	280.70
Public administration and defence	126.40	147.80	174.00	191.50	201.00	218.90	246.60	268.50	313.10
Community services	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Recreation, personal and other services	101.30	120.70	136.90	156.40	163.70	174.30	200.10	210.70	233.30
<b>Total all industries</b>	<b>110.40</b>	<b>130.30</b>	<b>151.70</b>	<b>169.60</b>	<b>179.80</b>	<b>195.50</b>	<b>221.40</b>	<b>246.40</b>	<b>282.20</b>
									<i>Standard errors level(a)</i>
	1983	1984	1985	1986	1987	1988	1989	1990	Nov 1990
Mining	366.30	383.20	415.40	427.90	465.20	523.90	546.60	586.30	2.00
Manufacturing	265.10	289.40	306.20	329.80	345.40	378.50	415.60	436.90	0.90
Food, beverages and tobacco	288.70	298.10	320.50	346.40	363.40	396.40	428.20	449.90	1.40
Textiles; Clothing and footwear	239.60	253.80	269.70	298.60	297.30	334.00	368.30	369.80	1.80
Paper, paper products, printing and publishing	280.50	313.40	327.20	349.00	392.40	406.20	455.20	460.20	1.50
Chemical, petroleum, and coal products	291.90	317.20	338.50	353.80	370.00	446.40	481.20	503.00	1.90
Metal products, machinery and equipment	265.30	306.20	317.80	335.20	355.90	384.70	421.10	452.90	2.40
Basic metal products	311.30	334.00	354.50	387.40	409.50	446.40	489.30	494.50	3.20
Fabricated metal products; other machinery and equipment	258.50	307.00	309.60	326.00	348.10	375.60	410.10	440.00	2.40
Transport equipment	268.70	293.10	325.30	340.80	357.70	387.40	418.60	463.10	5.80
Other manufacturing	256.10	270.00	295.30	321.60	340.40	365.10	412.90	430.70	0.80
Electricity, gas and water	311.40	345.30	361.90	383.20	394.00	433.10	459.60	499.50	0.20
Construction	264.30	326.70	336.40	363.20	374.50	411.60	408.60	442.10	2.10
Wholesale trade	273.00	301.40	325.50	351.40	380.90	400.80	419.10	444.80	1.70
Retail trade	233.40	273.10	288.50	310.50	320.30	349.00	374.60	392.00	1.40
Transport and storage	337.10	355.30	374.50	391.90	407.90	429.30	462.50	550.30	5.20
Communication	n.a.	n.a.	n.a.	389.40	399.80	445.80	463.90	504.10	2.10
Finance, property and business services	282.20	310.90	338.10	365.30	390.10	429.30	453.00	478.30	1.20
Public administration and defence	337.10	362.20	381.30	384.70	404.90	452.40	498.50	513.70	0.70
Community services	n.a.	n.a.	n.a.	409.40	435.70	473.90	499.70	541.00	0.60
Recreation, personal and other services	263.50	293.00	310.00	334.10	357.90	368.70	399.70	411.50	1.90
<b>Total all industries</b>	<b>299.30</b>	<b>329.20</b>	<b>348.70</b>	<b>372.50</b>	<b>393.90</b>	<b>429.20</b>	<b>457.90</b>	<b>488.30</b>	<b>0.40</b>

See footnotes at end of table.

TABLE 5. FULL-TIME ADULT NON-MANAGERIAL EMPLOYEES: AVERAGE WEEKLY EARNINGS,  
INDUSTRY, AUSTRALIA, AT NOVEMBER, 1974 TO 1990—*continued*  
(dollars)

Industry	PERSONS								
	1974	1975	1976	1977	1978	1979	1980	1981	1982
Mining	182.20	214.20	248.00	276.20	291.90	334.80	386.50	456.20	552.10
Manufacturing	133.30	146.70	167.40	185.90	199.80	222.50	248.10	286.30	316.80
Food, beverages and tobacco	131.10	147.20	167.10	187.30	198.10	223.50	243.60	295.90	336.20
Textiles; Clothing and footwear	100.30	121.20	138.30	158.30	168.50	180.80	200.20	219.70	255.70
Paper, paper products, printing and publishing	141.70	159.70	178.00	202.00	216.90	237.70	287.30	306.60	345.80
Chemical, petroleum, and coal products	143.40	161.90	182.20	201.90	221.80	248.00	285.00	291.20	331.20
Metal products, machinery and equipment	140.10	149.50	171.80	188.70	202.90	226.00	250.00	296.60	318.00
Basic metal products	159.70	167.80	193.20	217.70	231.50	259.50	297.30	340.10	358.20
Fabricated metal products; other machinery and equipment	135.30	143.30	164.10	178.10	191.50	216.40	233.30	290.00	309.50
Transport equipment	136.20	148.40	171.70	187.80	202.30	219.50	245.80	275.40	307.10
Other manufacturing	128.60	144.80	163.30	188.60	194.50	221.60	243.50	261.30	300.30
Electricity, gas and water	149.70	173.80	197.90	214.20	233.60	254.40	291.70	326.60	381.20
Construction	146.80	160.80	182.60	206.10	216.80	233.20	265.40	310.20	353.80
Wholesale trade	124.80	143.50	162.50	181.50	200.00	212.20	234.60	272.30	302.90
Retail trade	114.10	132.50	149.60	164.00	177.10	186.40	211.70	234.80	259.80
Transport and storage	157.60	168.50	192.50	214.60	225.70	244.60	274.80	323.60	366.80
Communication	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Finance, property and business services	124.50	147.90	169.90	187.50	195.40	214.40	241.30	266.90	316.80
Public administration and defence	141.30	162.50	189.80	207.90	219.50	237.30	268.50	289.50	340.80
Community services	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Recreation, personal and other services	118.80	140.40	157.90	179.10	188.00	197.60	235.00	246.90	270.60
<b>Total all industries</b>	<b>136.90</b>	<b>154.30</b>	<b>176.90</b>	<b>196.10</b>	<b>209.10</b>	<b>228.20</b>	<b>257.70</b>	<b>290.80</b>	<b>332.40</b>
									<i>Standard errors level(a)</i>
	1983	1984	1985	1986	1987	1988	1989	1990	Nov 1990
Mining	523.00	591.30	613.80	657.30	702.70	728.30	804.00	863.70	1.80
Manufacturing	337.70	362.10	389.90	411.80	436.50	479.10	523.00	539.10	0.80
Food, beverages and tobacco	345.70	360.00	379.30	409.70	428.60	471.30	509.00	527.80	1.30
Textiles; Clothing and footwear	268.10	275.60	301.50	343.70	352.50	391.60	427.40	428.60	3.30
Paper, paper products, printing and publishing	345.70	396.60	414.50	440.30	489.30	516.50	564.30	557.90	1.30
Chemical, petroleum, and coal products	363.60	395.80	421.40	459.20	465.50	555.70	572.90	599.70	2.40
Metal products, machinery and equipment	351.10	375.90	407.80	427.30	452.70	496.30	545.50	564.40	1.10
Basic metal products	392.50	419.80	456.40	490.60	521.90	568.10	629.20	655.70	0.60
Fabricated metal products; other machinery and equipment	336.00	359.70	389.00	407.80	425.00	472.60	518.70	539.10	1.90
Transport equipment	350.20	378.30	409.20	420.90	456.10	488.50	528.90	544.10	2.50
Other manufacturing	319.70	341.80	375.10	383.20	418.30	450.50	503.20	520.90	1.00
Electricity, gas and water	405.20	439.00	448.30	484.40	499.70	536.50	575.00	614.80	0.10
Construction	362.50	418.20	435.30	472.70	489.50	555.70	596.30	631.00	3.20
Wholesale trade	319.80	342.50	378.10	398.70	423.50	445.70	465.30	514.80	2.50
Retail trade	261.90	300.00	318.10	339.80	353.90	392.90	413.20	442.80	2.50
Transport and storage	385.00	411.60	432.10	470.20	504.00	528.10	546.30	609.70	1.40
Communication	n.a.	n.a.	n.a.	432.50	450.30	494.90	517.60	559.80	1.20
Finance, property and business services	320.60	348.90	378.90	406.30	441.50	481.20	511.90	556.20	2.10
Public administration and defence	367.40	392.40	411.70	414.30	434.90	478.60	523.50	544.40	0.80
Community services	n.a.	n.a.	n.a.	442.70	466.00	503.80	530.10	569.00	0.60
Recreation, personal and other services	289.20	323.70	343.90	372.40	395.10	411.60	431.00	442.70	2.30
<b>Total all industries</b>	<b>348.30</b>	<b>380.00</b>	<b>402.60</b>	<b>427.80</b>	<b>451.60</b>	<b>489.90</b>	<b>520.60</b>	<b>554.00</b>	<b>0.50</b>

(a) See Appendix B.

Source: *Average Earnings and Hours of Employees, Australia* (6304.0)



## EXPLANATORY NOTES

### Introduction

This publication provides an historical series of Average Weekly Earnings (AWE) for Australia. A number of separate AWE series have been linked together to form the series presented in this publication. As a consequence of the linking process the values shown in the historical series, particularly for earlier periods, do not accord with values previously published. This historical series has been presented to provide estimates of movement over time in AWE. Links have not been able to be made for all series back to the same period of time. However, for key data such as Average Weekly Total Earnings for Males, links have been established to provide data back to September quarter 1941. This series includes earnings from paid overtime. Appendix A provides a description of the linking process and the significant features of the linked series.

2. The scope of the current AWE survey and a short history of the AWE collection is described below, together with a summary of some of the particular features of national wage cases over this period.

### Scope of the current AWE survey (1983 to present)

3. All wage and salary earners who received pay for the reference period are represented in the survey, except:

- members of the permanent defence forces;
- employees of enterprises primarily engaged in agriculture, forestry, fishing and hunting;
- employees in private households employing staff;
- employees of overseas embassies, consulates, etc;
- employees based outside Australia; and
- employees on workers compensation who are not paid through the payroll.

4. Also excluded are the following persons who are not regarded as employees for the purposes of this survey:

- directors who are not paid a salary;
- proprietors/partners of unincorporated businesses; and
- self employed persons such as subcontractors, owner/drivers, consultants and persons paid solely by commission without a retainer.

### Notes on the estimates

5. Average weekly earnings statistics represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of employment. Changes in the averages may be affected not only by changes in the level of earnings of employees but also by changes in the overall composition of the employed wage and salary earners segment of the labour force. There are several aspects which can contribute to compositional changes, including variations

in the proportions of part-time, casual and junior employees, variations in the occupational distribution within and across industries and variations in the distribution of employment between industries.

6. Average weekly total earnings statistics are the sum of Average weekly ordinary time earnings and Average weekly overtime earnings. Consequently, the varying levels of overtime payments can cause both level changes in Average weekly total earnings and relativity changes between Average weekly total earnings and Ordinary time earnings. The level of overtime payments can be influenced by such aspects as the economic climate and seasonal variations.

### History of AWE statistics

7. In the period from 1941 to 1990 the ABS used two methods of estimating AWE. From 1941 to 1981 AWE was estimated using a method based on information contained in payroll tax returns (supplemented by some information supplied by Government agencies). Four different AWE series were produced based on this method. Since 1981 a sample survey method has been used and AWE has been estimated using data obtained directly from employers. Two series based on this method have been produced. A complete AWE series has been produced for presentation in this publication by linking the four payroll tax based series and the two sample survey series. The resulting linked series constitutes a composite in which values for earlier periods are in effect an index of earnings based on earnings levels in November 1983, cast back by the movements in the various series which have been linked together.

#### *1941 to September quarter 1981*

8. Payroll tax was introduced by Commonwealth legislation in 1941. Employers were subject to payroll tax if total wages and salaries paid to their employees exceeded a specified exemption level (20 pounds per week at 30 June 1941). Employers were obliged to lodge payroll tax returns with the taxation authorities and the ABS had access to those records. The payroll tax returns supplied earnings and employment data which were combined with equivalent data supplied by Commonwealth government bodies and data from other selected employers to construct the AWE estimates.

9. The levying of payroll tax became a State prerogative from 1 September 1971 except for the Australian Capital Territory and the Northern Territory, which remained under Commonwealth control. Over time, State governments adopted divergent payroll tax levying practices and, as a consequence, the payroll tax system became an increasingly unsatisfactory source of data for constructing AWE estimates.

#### *September quarter 1981 to the present*

10. From the September quarter 1981, the ABS estimated AWE from wages and employment data collected directly from a stratified random sample of employers. The major reasons for the change were:

- the increasing difficulty of estimating earnings and employment for those employers not covered by the payroll tax collection because of frequent changes and disparate exemption levels applied to employers' payrolls by State governments (exemption levels were inconsistent across States from January 1976)
- the possibility that one or more States would abandon payroll tax either generally or selectively, for particular industries and/or geographic areas
- the need expressed by major users for more detailed quarterly estimates of earnings than were available from payroll tax data (eg earnings data classified by sex) and
- the necessity for extensive revisions of the AWE series each time the population census based employment series used in the AWE calculations was revised.

11. Since August 1981 the ABS Register of Businesses has been used as the framework from which the sample of respondents to the Survey of Average Weekly Earnings has been drawn.

#### Wage case decisions and their relationship to AWE

12. The AWE statistics are estimates of the average earnings of employees and are made up of the following elements:

- rates of pay paid to employees under awards and agreements registered with the various wage fixing authorities or agreed between the employer and the employees
- overtime for additional hours worked above the prescribed minimum set out in awards, etc and agreements and
- other payments (such as overaward payments, holiday pay, long service leave etc) paid to employees.

13. Decisions made by wage fixing authorities in Australia relate principally to standard hours to be worked each week, rates of pay for standard hours worked and loadings to be paid for various activities involved in employment including loadings for hours worked in excess of standard hours. Consequently, there is no direct relationship between movements shown by the AWE series and the pay increases awarded by wage fixing authorities from time to time. Nevertheless, the decisions made by wage fixing authorities have had a significant influence on the AWE series. A detailed history of wage fixing in Australia is contained in the Labour Reports issued by the Australian Bureau of Statistics (ABS). Issues of particular interest are *Labour Report 1959* No. 47, *Labour Report 1964* No. 51 and *Labour Report 1973* No. 58. Some limited information summarising wage fixing in the period 1974 to 1990 can be found in various issues of *Year Book Australia* (ABS Catalogue No. 1311.0).

14. Wage fixing decisions made by the Australian Industrial Relations Commission and its various predecessors over time have taken account of movements in ABS price indexes. From July 1941 to July 1961 the

Commission took account of movements in the Retail Price Indexes (for most of this period the C Series Index was used) for the purpose of awarding wage increases. However, full automatic indexation of wages only occurred at one time in this whole period, from February 1951 to September 1953. From 1961 until 1990 the Consumer Price Index (CPI) was taken into account when adjusting wages. In September 1983 the Commission decided that it would 'try once again to operate a centralised system (of wage fixing) based on prima facie full indexation based on CPI movements'. However, these adjustments were not automatic (see National Wage Case 1983 discussed below).

15. In order to explain the large percentage movements in Average Weekly Earnings for the periods 1950-51, 1959-60, 1973-74, 1980-81 and 1983-84 appropriate parts of selected decisions of the Commission are set out below.

#### Basic wage inquiry 1949-50

16. The Commonwealth Court of Arbitration and Conciliation determined new rates for the basic wage to operate from the beginning of the first pay period in December 1950. The new basic wage of eight pounds two shillings (\$16.20) per week was subject to full indexation using the C Series Retail Price Index. Retail prices rose rapidly in 1950-51 and as a consequence large automatic increases were awarded in the basic wage.

#### Basic wage inquiry 1959

17. The Conciliation and Arbitration Commission awarded a 15 shilling (\$1.50) per week increase (about 6 per cent) in the basic wage payable from the beginning of the first pay period commencing on or after 11 June 1959.

#### Equal pay case 1972

18. Subject to a 3 stage phasing-in period, the minimum wage for adult males was awarded to adult females. Initially (at December 1973) the minimum wage for an adult female was to be 85 per cent of the relevant male minimum wage, increasing to 90 per cent by 30 September 1974 and to 100 per cent by June 1975. These changes in female award rates of pay were a major factor contributing to the large increase shown in AWE in 1974-75.

#### National wage case 1974

19. The Australian Conciliation and Arbitration Commission increased Federal award rates of pay for both adult males and females by 2 per cent plus a flat amount of \$2.50 per week. The minimum wage for adult males was increased by \$8.00 per week.

#### National wage cases 1980, 1981 and 1982

20. During the period 1980 to 1982 there was a substantial increase in the AWE series. In 1980, wage increases were awarded in January and July of 4.5 per cent and 4.2 per cent respectively. In 1981 there were national wage case increases of 3.7 per cent and 3.6 per cent paid in January and May of that year. As well as the national increases there were two State wage cases. The Western Australian Industrial Commission granted an increase of \$6.30 in November 1981 and the Industrial Conciliation and Arbitration Commission of Queensland

granted an increase of \$6.30 for males and \$5.10 for females which was also payable from November 1981.

21. In 1982 there were a number of State wage cases. There were two increases granted in Queensland (\$9.00 in June 1982 and \$9.50 in December 1982), while the New South Wales Industrial Commission granted a 4.3 per cent increase in January 1982.

22. In the period 31 July 1981 to 6 October 1983 no national wage case increases were granted by the Australian Conciliation and Arbitration Commission.

#### National wage case 1983

23. The Australian Conciliation and Arbitration Commission awarded a 4.3 per cent increase in award wages based on CPI movements for the March and June quarters 1983 operative from 6 October 1983 (with the exception of Queensland, where the start date was 10 October 1983).

24. The Commission adopted a new wage fixing system in this decision and determined to adjust award wages and salaries every 6 months in relation to the last two quarterly movements in the CPI unless persuaded to the contrary.

#### Related publications

25. Users may also wish to refer to the following ABS publications, which are available on request.

*Occasional Paper No 1986/1: Statistics on Wages, Earnings, Income and Labour Costs — a Guide to Their Concepts, Measurement and usage* — issued June 1986

*Information Paper: Review of ABS Employment Statistics* (6239.0) — issued July 1981

*Information Paper: Average Weekly Earnings: New Series to Replace the Former Payroll Tax Based Series* (6336.0) — issued March 1982

*Information Paper: New Statistical Series: Employment, Average Weekly Earnings, Job Vacancies and Overtime* (6256.0) — issued June 1984

*Average Weekly Earnings, Australia (Preliminary)* (6301.0) — issued quarterly

*Average Weekly Earnings, States and Australia* (6302.0) — issued quarterly

*Average Earnings and Hours of Employees, Australia* (6304.0) — issued annually

*Distribution and Composition of Employee Earnings and Hours, Australia (Preliminary)* (6305.0) — issued annually

*Distribution and Composition of Employee Earnings and Hours, Australia* (6306.0) — issued annually

*Weekly Earnings of Employees (Distribution), Australia (Preliminary)* (6309.0) — issued annually

*Weekly Earnings of Employees (Distribution), Australia* (6310.0) — issued annually

*Employed Wage and Salary Earners, Australia* (6248.0) — issued quarterly

*Award Rates of Pay Indexes, Australia* (6312.0) — issued monthly

*The Labour Force, Australia* (6203.0) — issued monthly

*Labour Statistics, Australia* (6101.0) — issued annually

*A guide to Labour Statistics* (6102.0) — issued February 1986

*Labour Reports* (6.7) — issued annually, last issue 1973

*Consumer Price Index* (6401.0) — issued quarterly.

26. Current publications produced by the ABS are listed in the *Catalogue of Publications and products, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released within the next few days. The Catalogue and Publications Advice are available from any ABS office.

#### Unpublished statistics

27. In some cases, the ABS can also make available other information which is not published. For example, most tables within this publication can be made available at the State level. This information may be made available in one or more of the following forms: microfiche, photocopy, data tape, computer printout, diskette, clerically-extracted tabulation. Generally, a charge is made for providing unpublished information. Inquiries should be made to Mick Atkinson in Canberra (06) 252 5946.

#### Symbols and other usages

.. not applicable  
n.a. not available

28. Where figures have been rounded, discrepancies may occur between sums of the component items and totals.



## APPENDIX A: TECHNICAL NOTE

### DESCRIPTION OF THE LINKING PROCESS OF THE AVERAGE WEEKLY EARNINGS SERIES

#### Payroll tax series methodology

##### *Recorded and unrecorded employment*

Quarterly estimates of Average Weekly Earnings (AWE) published before the December quarter 1981 were derived largely from employment and earnings data obtained from returns covering most private employees and all government employees; this component was referred to as 'recorded employment'. It was supplemented by data estimated for the balance of private employees - referred to as 'unrecorded employment'. Recorded employees were covered by payroll tax returns, public sector returns covering Commonwealth, State and local government employees and returns from some large employers specifically exempt from payroll tax (eg non-government hospitals).

2. The comprehensive employment figures provided by the population censuses were treated as benchmarks which reflected total employment at a given point in time. 'Recorded employment' for males and females and each State and industry was then compared with the employment from the census for the equivalent categories of employees. The difference between total employment provided by the census and 'recorded employment' from the returns became the estimate of 'unrecorded employment' as at census date.

3. From the benchmark date onwards, employment changes were estimated in both the recorded and unrecorded components of total employment from:

- direct information from payroll tax and other returns or
- a set of procedures to account for employers entering and leaving the recorded and unrecorded employment sectors.

4. Employers previously below the payroll tax exemption level could become liable for tax because the total amount of their payroll increased due to increases in wage levels or an increase in the number of employees. Also, other new employer units could be created; some employers in the recorded sector could reduce their wages bill and move into the unrecorded sector; and employers in either sector could go out of business or be absorbed into another enterprise. Estimates of all such changes were made to allow the size of the recorded employment and unrecorded employment sectors to be estimated. In the absence of other information, however, the underlying assumption in the calculation of employment estimates was that unrecorded employment (subject to allowances made for the above) changed at the same relative rate as recorded employment.

5. The size of the unrecorded sector was important in the estimation of average earnings for all employees. It had been determined from other sources that the average earnings of employees in the unrecorded sector were appreciably lower than those in the recorded sector, so that the relative size of the two component sectors had a

significant influence on the average of the two sectors combined.

#### Earnings level of unrecorded employment

6. For industries other than agriculture and private domestic service, aggregate earnings for unrecorded employees were estimated by imputing an average wage to these employees and multiplying this by the estimate of unrecorded employment. For the agriculture and private domestic service industries, in which the majority of employers were not liable for payroll tax, employment and earnings were estimated from other sources and included in the calculations. Before the Labour Force Income survey in November 1969 there was no usable current data on which to base estimation of the earnings of employees of payroll tax-exempt employers, although it was generally considered that the average level of wages paid to such employees was less than that paid by employers liable for payroll tax. Until 1969 the average wage of unrecorded employees was imputed to be 80 per cent of the average wage of employees of the recorded sector, this ratio applying to each State. On the basis of the income survey in 1969, the ratio was calculated and applied separately for each State. However, the ratio at the Australia level, which was the weighted average of the State figures, remained at 80 per cent.

#### Male equivalent ratios

7. Estimates of AWE were derived by dividing estimates of total earnings (of recorded and unrecorded employees combined) by estimates of total employment. Data obtained related to the quarter as a whole, and adjustments were applied to obtain average weekly earnings. Historically, Australian wage fixing procedures have been concerned particularly with the level of wages paid to males, who were taken generally to be the sole or main provider of family income. (Prior to 1972 and the Equal Pay Case, (fully implemented by 1975), basic or minimum wages were generally set in terms of male wages). Although payroll tax returns provided separate information for male and female employment they combined male and female earnings. Accordingly, AWE was calculated in terms of male units. Total employment for the purpose of this calculation comprised total male employment plus female employment converted to 'male equivalents'. The conversion factor applied to female employment was the ratio of female to male earnings, estimated independently (principally from other ABS collections).

#### Post-censal revisions

8. Significant revisions were a feature of the payroll tax based series. As the relative size of the unrecorded employment sector changed, so its effect on the overall average (for recorded and unrecorded sectors combined) also varied. The unrecorded employment estimates were subject to revision when new benchmarks became available after the next population census. Another cause of revision to the series was revision in data used in the calculation of the estimates (eg in the ratio of female to

male earnings.) These revisions, sometimes dating back a number of years, resulted in several overlapping series.

### Sample survey series

9. Following a major review, the ABS decided in 1980 to develop a set of employer surveys, including the AWE quarterly survey, with the sample framework based on the ABS Integrated Register of Businesses. It was recognised that the register required upgrading, particularly in its coverage of small businesses, and this was achieved between 1981 and 1983. A sample survey of employers to obtain information for the calculation of AWE was introduced on an interim basis in August 1981 and conducted quarterly until November 1983.

10. For November 1982 the sample was revised to allow for changes in the ABS Register of Businesses. From August 1983 a new sample survey based on the upgraded ABS register replaced the interim survey, and the sample is now updated quarterly to take account of new businesses, those which have ceased operation and structural changes such as takeovers and mergers. The data from the interim survey were revised to provide a consistent series once information became available from the current survey.

11. Data for the current quarterly survey are obtained directly from a sample of approximately 4,800 private and public sector employers, who are selected from the ABS Register of Businesses to ensure adequate State, size and industry representation. The reference period for the survey is the last pay period ending on or before the third Friday of February, May, August and November each year. Estimates of AWE are derived by dividing estimates of aggregate weekly earnings by estimates of employment. The reference period (of one specified week) is different from that of the payroll tax based series, which covered the whole calendar quarter.

### Linking the series

#### *Methodology*

12. In the September quarter 1981, the payroll tax based collection and the first collection of the interim sample survey of employers were run in parallel. Estimates of total weekly earnings for all males were obtained from both collections to provide a link between the two series.

13. In August and November 1983 the new (current) sample survey and the interim survey were run in parallel, and estimates from previous quarters of the interim survey back to 1981 were revised using the relationship between the estimates produced from the two surveys in November.

14. A complete series from the September quarter 1941 to November 1990 has been produced in this publication for total weekly earnings (all males) by linking the four payroll tax based series (not seasonally adjusted) and the two sample survey series (see paragraphs 18 to 25 below for details). The linking has been based on non-seasonally adjusted data because only some of the series have been seasonally adjusted. The sample survey series, being based on a particular mid-quarter pay period, has less seasonality than the payroll tax based

series; the payroll tax series were based on average earnings over whole quarters, in which highly seasonal events (eg prepayment of leave) and calendar variations (affecting number of paydays) could have marked effects on results. It should be noted that data in the linked series encompass changes in methodologies, concepts and definitions and are necessarily different from the data which would have been obtained if the series had been conducted on the same basis over the whole period.

15. Other issues of which users of these data should be aware include:

- the use of rounded data (to the nearest 10 cents) in the linking of series. This is particularly pertinent to the earlier years of the series when a 10 cent discrepancy will have a greater effect than would be the case in the later years of the series and
- the conversion of Australia's currency base from imperial currency to decimal currency in February 1966.

16. Users of the data contained in this publication should avoid using it as a definitive source for values at any given point in time. The data is more suited to providing trends in estimates of average weekly earnings over the period.

17. The resultant linked series constitute a composite in which the earlier values are in effect an index of earnings based on earnings levels of November 1983. The values shown for past quarters (in earlier component series) were determined from the relative levels at August 1981 and November 1983 and other link points, and from the quarter to quarter relative movements in between.

18. The dates where the series are linked are:

#### November 1983

current sample survey linked to interim sample survey. Interim survey estimates were revised

#### September quarter 1981

revised interim sample survey for mid August reference date linked to the September quarter payroll tax based Series

#### September quarter 1961

Series F linked to Series D

#### September quarter 1947

Series D linked to Series A

19. Details of each of the series are contained in paragraphs 21 to 24. The following diagram represents the linking of the series.

20. The individual series used are referred to as Series A, Series C, Series D and Series F; and two sample survey series, an interim survey and the current survey. The dates given below for the individual payroll tax series relate to the portions of the series selected for the best possible linking of the series, and not to the total

period of the original series, which are more extensive. Some points highlighting the different methodologies and concepts of the series, the methods used to link them and a little of their background are given in this appendix.

21. The Commonwealth Payroll Tax Act provided for the imposition of a tax on wages and salaries paid or payable after 30 June 1941. The tax was payable by employers if wages and salaries exceeded a specified amount (the exemption level). Exempted employers included certain Australian government bodies, religious,

benevolent and similar organisations and public hospitals.

22. Significant features of the payroll tax based Average Weekly Earnings Series A:

- data from the September quarter 1941 to the September quarter 1947 are included in the linked series. At September 1947 the Australian series was linked to Series D
- the ratio of the unrecorded to the recorded average wage was set to 80 per cent for all States and

### Linking Australian level AWE Series

	Payroll Tax				Surveys	
	A	C	D	F	Interim	Current
1941	Sept 41					
1942						
1943						
1944						
1945						
1946						
1947		Sept 47				
1948						
1949						
1950						
1951						
1952						
1953						
1954						
1955						
1956						
1957						
1958						
1959						
1960						
1961			Sept 61			
1962						
1963						
1964						
1965						
1966						
1967						
1968						
1969						
1970						
1971						
1972						
1973						
1974						
1975						
1976						
1977						
1978						
1979						
1980						
1981				Sept 81	Aug 81	
1982						
1983						Nov 83
1984						
1985						
1986						
1987						
1988						
1989						
1990						

remained constant until separate State ratios were established (see Series F below)

- in the agriculture and private domestic service industries, coverage of payroll tax was low. Therefore, since frequent, up to date information on recorded employment in these industries was not available, employment and earnings data were obtained from other sources and included in the calculations
- for the agriculture industry, employment was obtained from the Agriculture and Pastoral Census. Total earnings were obtained by multiplying this employment by an estimate of average rural wages derived from rural payroll tax returns
- employment and earnings for private domestic staff were estimated between population censuses
- for 1941-46 the ratio of female to male earnings was set to 45 per cent for all States
- for 1946-47 the ratio of female to male earnings was set to 49 per cent for all States.

23. Significant features of the payroll tax based Average Weekly Earnings Series C:

- the ratio of the unrecorded to the recorded average wage remained at 80 per cent
- an absentee adjustment of -2 per cent for males and -3 per cent for females was made to unrecorded employment. This was applied to allow for persons reporting in the census as 'at work', while temporarily absent on leave without pay etc., and therefore not currently on the payroll of any employer
- agriculture industry wages and employment were revised as later Agricultural and Pastoral Census data became available
- for 1947-48 the ratio of female to male earnings was set to 50 per cent for all States
- for 1948-50 the ratio of female to male earnings was set to 51 per cent for all States
- from January 1951 the ratio of female to male earnings was set to 55 per cent for all States and remained constant until separate State ratios were established (see Series F below).

24. Significant features of the payroll tax based Average Weekly Earnings Series D:

- data at the Australian level from the September quarter 1947 to the September quarter 1961 are included in the linked series
- the ratio of female to male earnings remained at 55 per cent for all States
- the ratio of the unrecorded to the recorded average wage remained at 80 per cent for all States
- the absentee adjustment was varied to -1.5 per cent for males and -1.3 per cent for females

- a part-time adjustment of +0.3 per cent for males and +2.5 per cent for females was introduced, affecting employment and wages, to counter underenumeration of part-time employees in the 1954 and 1961 population censuses
- the employment level of private domestic staff was kept constant at the 1961 population census figure during this series.

25. Significant features of the payroll tax based Average Weekly Earnings Series F:

- data at the Australia level from the September quarter 1961 to the June quarter 1981 are included in the linked series
- the ratio of female to male earnings was calculated for each quarter for each State. The ratio at the Australia level was the weighted average of the State figures
- the uniform ratio of 80 per cent for all States for the unrecorded to the recorded average wage was revised. The following ratios were applied: NSW, VIC, TAS, 80 per cent; SA, WA, 76 per cent; QLD, 85 per cent. The ratio at the Australia level however, remained at 80 per cent (the weighted average of the State figures)
- the part-time adjustment was discontinued. In the population census in 1966 a new definition of the labour force was adopted which resulted in the inclusion of a large number of part-time employees who were previously excluded
- the adjustment for absenteeism was discontinued, as under the new definition of the labour force adopted in the 1966 Population Census it was unlikely that persons not appearing on the payroll of an employer would be recorded as employed
- an adjustment was introduced to counter the understatement in average weekly earnings caused by overstatement in employment due to multiple job holders. This was a constant correction factor, since the incidence of multiple job holding was considered to be fairly stable over time. The correction factor was derived as the ratio of the AWE estimate based on first job earnings only, to the AWE estimate calculated before adjustment for multiple job holding
- a revised method for obtaining data for the agriculture industry was introduced. Total wages for this industry (estimated by the National Accounts Section of the ABS) were divided by an average wage for this industry (estimated from payroll tax returns), to obtain employment

- the employment level of private domestic staff was kept constant at the 1966 population census level
- separate figures were published for the ACT and the NT from the December quarter 1973
- ACT and NT were not included in estimates for NSW and SA respectively, as in the previous series.

26. Significant features of the interim sample survey of employers (see paragraphs 9 to 11 for a description of the sample survey):



- data at the Australia level are included in the linked series from August 1981 to August 1983
- in September quarter 1981 the interim AWE sample survey and the payroll tax collection were run in parallel to provide a link between the series
- in August 1981 the sample was selected from the ABS Integrated Register of businesses. It was originally intended that this sample be used for the duration of the interim sample survey
- with the introduction of the interim survey the reference period was changed from the whole calendar quarter in which the collection was conducted to the month in which the reference period occurs ie from the 'September quarter' to 'August', because the surveys (unlike the payroll tax based series) provide estimates for a defined pay week, rather than for a full quarter.
- in November 1982 the sample was revised to allow for changes to the register mainly due to the heavy rate of business terminations which had occurred since the sample was selected.

27. Significant features of the current sample survey of employers, based on the updated ABS Integrated Register of businesses:

- data from November 1983 to November 1990 are included in this publication
- in August and November 1983 the interim sample and the new sample surveys were run in parallel. Estimates for the interim series, ie from August 1981 to August 1983, were revised based on the relationship between the estimates produced from the interim and new sample surveys in November 1983
- data from this series were first published in the March quarter 1984 publication
- the sample is revised each quarter to take account of new businesses, those which have ceased operation and structural changes such as takeovers and mergers
- in November each year data on hours paid for, and more detailed dissections of earnings are collected and published in a separate series, providing some degree of continuity with the previous series of surveys conducted annually in October.

## APPENDIX B: TECHNICAL NOTE

### RELIABILITY OF ESTIMATES

As the estimates in the sample survey based series of average weekly earnings are based on information relating to a sample of employers rather than a full enumeration, they are subject to sampling variability. That is, they may differ from the figures that would have been produced if the information had been obtained from all employers. This difference, called sampling error, should not be confused with inaccuracy that may occur because of imperfections in reporting by respondents or in processing by the ABS. Such inaccuracy is referred to as non-sampling error and may occur in any enumeration whether it be a full count or sample. Efforts have been made to reduce non-sampling error by careful design of questionnaires, detailed checking of returns and quality control of processing.

2. One measure of sampling error is given by the standard error which indicates the degree to which an estimate may vary from the value that would have been obtained from a full enumeration (the 'true' figure). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about nineteen chances in twenty that the difference will be less than two standard errors.

3. An example of the use of a standard error is as follows. If the estimated average earnings was \$380.00 with a standard error of \$2.00, then there would be about two chances in three that a full enumeration would have given an estimate in the range \$378.00 to \$382.00 and about nineteen chances in twenty that it would be in the range \$376.00 to \$384.00.

4. An example of the use of a standard error for an estimate of quarterly change is as follows. If the estimated standard error for a quarterly change estimate of average weekly earnings was \$1.00 and the quarterly change estimate between two quarters was \$1.50, then there would be about two chances in three that a full enumeration would have given a quarterly change estimate in the range +\$0.50 to +\$2.50 and about nineteen chances in twenty that it would be in the range -\$0.50 to +\$3.50.

5. The standard errors of the AWE estimates in the interim sample survey (ie. between August 1981 and August 1983) were generally much higher than the

standard errors in the subsequent new sample survey, particularly for males, principally because of the smaller sample size. For example, for average weekly ordinary time earnings and average weekly total earnings for full-time adult males for Australia, the standard errors were about two and three times higher respectively in the interim sample survey than in the new sample survey.

6. Standard errors are provided for the most recent quarter in the publication. For standard errors for previous series reference can be made to the relevant publication.

7. The payroll tax based average weekly earnings series involved the complete enumeration of the payroll tax framework. For the public sector, all Australian and State government departments and authorities were included, and all local government bodies were included except in Victoria and Western Australia, where a sample of local government units was used. Although sampled, enumeration of the local government units in these States was high, and standard errors low.

8. While sampling error was negligible for the recorded employment sector of the payroll tax based series, there were a number of other sources of probable error in the series, likely to have been significant. The major sources of possible error were the assumptions and imputations made in estimation procedures, particularly in respect of:

- the size of and changes in unrecorded employment
- the earnings of employees in the unrecorded employment sector
- the female to male earnings ratio
- the lack of timeliness in submitted payroll tax returns (quarterly or annually, generally only approved for smaller employers) and
- problems associated with data derived from different administrative and other collections, which made it difficult to standardise concepts, definitions, classifications and procedures.

## APPENDIX C: GLOSSARY

*Adult employees* are those employees 21 years of age or over and those employees who, although under 21 years of age, are paid at full adult rate for their occupation. Junior employees are those employees who are not adults.

2. *Average weekly earnings* statistics represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of AWE are derived by dividing estimates of weekly total earnings by estimates of employment. Changes in the averages may be affected not only by changes in the level of earnings of employees but also by changes in the overall composition of the employed wage and salary earners segment of the labour force. There are several factors which can contribute to compositional changes such as variations in the proportions of part-time, casual and junior employees, variations in the occupational distribution within and across industries and variations in the distribution of employment between industries. Such effects may apply differently in different States, and over time.

3. *Average weekly earnings (payroll tax based)* included award and overaward wages and salaries, the earnings of employees not covered by awards, overtime earnings, bonuses and allowances, commissions, directors' fees and payments made retrospectively or in advance during the quarter (at times, retrospective payments had a significant impact on quarterly movements).

4. *Consumer Price Index (CPI)* measures quarterly changes in the price of a basket of goods and services which account for a high proportion of expenditure by the CPI population group.

5. *Employees* refers to all wage and salary earners (as defined in paragraphs 3 and 4 of the Explanatory Notes) who received pay for any part of the reference period.

6. *Full-time employees* are permanent, temporary and casual employees who normally work the agreed or award hours for a full-time employee in their occupation and received pay for any part of the reference period; if agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 35 hours or more per week. Part-time employees are those who are not full-time.

7. *Industry* is classified according to the *Australian Standard Industrial Classification (ASIC) 1983 Edition, Volume 1 - The Classification* (1201.0).

8. *Managerial employees* are managerial, executive, professional and higher supervisory staff (November surveys only), generally defined as those employees who are ineligible to receive payment for overtime or, although subject to payment for overtime, are in charge of a significant number of employees in a separate establishment. Non-managerial employees are those who are not managerial employees.

9. *Reference period* for the survey refers to the last pay period ending on or before the third Friday of the middle month of each calendar quarter.

10. *Sector*. Public sector includes all local government authorities and government departments, agencies and authorities created by, or reporting to the Commonwealth and State Parliaments. All remaining employees are classified as private sector.

11. *Weekly ordinary time earnings* refers to one week's earnings of employees for the reference period attributable to award, standard or agreed hours of work. It is calculated before taxation and any other deductions (eg superannuation, board and lodging) have been made. Included in ordinary time earnings are award payments, base rates of pay, overaward payments, penalty payments, shift and other allowances; commissions if a retainer is also paid; bonuses and similar payments related to the reference period; payments under incentive or piecework; payments under profit sharing schemes normally paid each pay period; payments for leave taken during the reference period; all workers' compensation payments made through the payroll; and salary payments made to directors. Payments not related to the reference period such as overtime payments, back pay, pay in advance, leave loadings, severance, termination and redundancy payments and other payments are excluded.

12. *Weekly total earnings* of employees is equal to weekly ordinary time earnings plus weekly overtime earnings.



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